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Catherine J. Frieman. *An Archaeology of Innovation: Approaching Social and Technological Change in Human Society* (Manchester: Manchester University Press, 2021, 238 pp., 24 figs, 2 tables, hbk, ISBN 978-1-5261-3264-2, eBook ISBN 978-1-5261-3267-3)

Innovation and change are some of the most recurrent themes addressed not only in archaeological research but also through social, economic, environmental, or biological sciences (among others). This interest can be justified since transitional moments are those which we usually know least, or because they are traditionally seen as structural in our shared past, and crucial for understanding the social trajectories that came afterwards. These transformative episodes have primarily been approached through a 'scientific' and even political lens that leads to sometimes direct transpositions from current points of view to the past. Only more recently have social considerations that try to accomplish archaeology's primary goal—which includes understanding the practices of past individuals and communities, materialities, or biographies—been fruitfully explored. *An Archaeology of Innovation* by Catherine J. Frieman succeeds, in an exceptionally easy to read and sometimes humorous way, in giving us an overview of different approaches to innovation, combining them from an archaeological perspective, and backing them up with multiple theories and examples from different times and regions. What this book provides is an updated archaeological take on the study of innovation, change, and resistance in the past and present, not reducing these subjects to '"Do-Need" frameworks' (p. 159), but instead highlighting archaeology's social nature.

The work comprises seven chapters, plus an introduction and a conclusion, and twenty-six useful images and tables that simplify complex theories and concepts developed through the text.

In the Introduction, the first, and to me the most important, concept is the idea of knowledge 'bricolage'. For Frieman, this means that by overlapping bits and pieces of previous scientific work (from archaeology and other sciences), it will be possible to 'construct new and different visions of past worlds and the people who inhabited and created them' (p. 3). It becomes clear through the book that this bricolage includes not only scientific knowledge but also, particularly, all experiences, sensations, and even feelings (which prompted the author to write this book). Bricolage also works as a metaphor for innovation itself—the sum of different but connected parts.

Chapter 1 explores the value that innovation studies have and how archaeology, and our research methods and perspectives, can approach past and current sociocultural and technological change. In this, the current 'capitalist ways of thinking' (p. 31) are deconstructed. The case of technological change in Tasmania, and the incorrect images associated with it through time, reveals that Frieman's book is a 'reaction and a sort of answer' (p. 8) to biased approaches to innovation and change. Such approaches largely adopted evolutionary and unidirectional (constantly improving in relation to the previous creation), functionalist, Eurocentric, and male-based models. Innovation must be understood as inherently social (i.e. every approach must consider broader social-technological shifts), encapsulating not only the accepted and implemented changes visible in the archaeological record, but also the ideas needed to develop them, the different experimentation and alteration phases, and the social processes behind the adoption or rejection of innovations. In this sense, archaeologists are particularly well-placed to identify (when possible) or theorise about past innovation stages, but also to look for it in our present society, since change can be seen as a 'driving force […] and a conceptual tool used to justify and increase inequality' (p. 31).

Chapter 2 discusses the influence that the fragmented archaeological record has in the perspectives adopted and methodological choices made to address innovation, criticising the lack of human perspective and the existing preconceptions in some evolutionary theories. Here, the early agricultural studies are thoroughly explored, starting with the idea of an 'agricultural revolution' (p. 34), moving on to the socio-evolutionary models of human society (p. 37), then to Evolution Culture Theory (p. 42) and ending with Behaviour Archaeology (p. 46). Nevertheless, and although value is recognized in many of the theories and approaches presented, the author sets three, in my perspective solid, premises for a social archaeology of innovation: innovations must be read in relation; they are and always have been frequent; and each has its own history or biography. In the end, the more historical and contextualising approaches are emphasized since they allow us to explore persistence and resistance practices while humanising innovations.

The temporal spectrum of innovation, is deconstructed in Chapter 3, with the traditional dichotomy between innovation/invention also addressed. Innovation has traditionally been associated with singular events and to a 'solitary genius inventor' (p. 69) but, by using examples from the development and spread of early metallurgy, the author makes it very clear that this framework should no longer be applied to archaeological contexts. Innovation is the result of dateless processes, which include different experimentation, adaptation, reinterpretation, and inputs from multiple agents, identities, and groups. In this chapter, textile production is used as a metaphor for innovation, which conveys the author's perspective: textiles, as innovations, are complex, composite, and multi-authored, being constantly mixed, transformed, and recycled (p. 71), as well as making use of bricolage, as mentioned earlier. The usually negative connotations associated with imitations are criticized for being a transposition of a clearly modern idea to prehistoric contexts. The complex process behind imitations, and all the social dynamics they encapsulate, is explored in Chapter 4, alongside the issues of why innovate and why adopt innovations.

The 'why' questions are usually less explored in archaeological research but have been addressed in other sciences that

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aim to understand why people 'will or will not adopt' an innovation (p. 79). By using examples from Aboriginal Australian people and Native Americans, the author shows us that adoption, like innovation itself, is a 'multi-stage process' (p. 80), implying that imitations can reflect the appropriation/incorporation/reinterpretation events of innovations. In addition, the individualised forms of ranked societies, connected to the 'solitary inventor', are compared to today's 'influencer' concept and to the different scales of human belonging (sex, gender, age, community, ideology, religion, etc.). Frieman concludes that to understand adoption (or its absence), humans cannot be read with 'linear models rooted in concepts of functionality and efficiency' (p. 99) since we are connected beings, that need and depend on other beings.

This connection also affects how innovation is disseminated (p. 104) and communicated. In Chapter 5, concepts and theories such as the meme and cultural virus theories (p. 116), regional innovation systems (p. 119), apprenticeship (p. 112), core/peripheral/marginal regions, and even the meanings of migration and diffusion are critically intertwined in the production of a solid theoretical framework. Through this chapter, the author suggests that direct communication (i.e. word-of-mouth) and oral tradition have a determinant role in the social process of transmitting innovation through a mainly social and cultural geography. This means that kinship and social relations, given that they can maintain their complexity through generations and space while allowing flexibility, act in the spread of new things (which might imply human mobility).

But what happens when innovations are not adopted, are rejected, or just fail? These processes are usually associated with traditional or conservative communities that tend to be labelled as 'anti-innovation' (p. 142). This opposition to innovation is reconciled in Chapter 6. The author starts with late prehistoric Cornwall and its connection and answer to the Roman way of life, and cites examples from the American Amish communities, to show that being conservationist and maintaining previous traditions does not imply the absence of innovations nor that communities lack resourcefulness or creativity. With these and other examples, it is easily understandable that the 'decision-making process' (p. 147) leading to the rejection of innovation or failure is as socially complex as the path that leads to its success and that it is extremely dependent on social networks and relationships. Moreover, the act of resisting can theoretically 'enhance the closeness of those ties' (p. 157), while it can also cause the reorganisation (or even collapse) of those networks; the negotiation of accepting or rejecting technological or social innovations must also consider what might have been 'destroyed or disrupted' (p. 148). To study these practices, which leave almost no evidence, archaeologists must further consider that the way they express themselves is highly affected by 'Eurocentric and masculine strands of Enlightenment thinking' (p. 142) and by a current 'inordinate valorisation of innovation' (p. 142), that lead us to favour shifting periods over continuity. This is one of the major contributions of the book, always making us think and rethink about the hidden preconceptions behind our ideas and theories.

The last issue addressed (in Chapter 7) is more complex and intangible: it concerns the reasons that lead us to innovate and how creativity and innovativeness influence and dictate that ability today and in the past. The author intentionally separates innovativeness (the 'tendency […] to embrace innovation, to experiment or invent and to adopt new things' (p. 159) from creativity, since the former can be

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connected to a societal scale and the latter to a personal scale, more challenging to achieve. The research surrounding an origin of creativity in the Palaeolithic is strongly criticised, mainly because the almost racist idea that *Homo sapiens* is the only species capable of creating '*things* (tangible or intangible) that are both novel and useful (functionally or socially or both)' (p. 166). The author concludes that both creativity and innovativeness should be comprehended as 'externalised social phenomena' that require 'embodied knowledge and practices' (p. 168), taking place, once again, in the flux that connects and is influenced not only by humans but also by non-human entities (animals, plants, landscapes). Frieman thus makes it easy to understand that both concepts are connected, although she separates them to clarify the approach.

The Conclusion is perhaps the most exciting chapter in the book and it can be read independently. Here, the author reflects on our current innovative society and how archaeology, as a science, seems to be a little resistant to adopt 'thematic innovations' (like feminism). This chapter clarifies that Frieman aims not only to address archaeological questions but also to connect them with our present. By promoting a holistic approach that recognizes our complex networks and behaviours, 'Archaeology of complexity' gives a voice to traditionally neglected minorities like 'women and children, Indigenous peoples, and occupied populations' (p. 191)—who feature large in the book—and criticises the evolutionary models and materialistic theories that overlook people's complex worlds.

Although I endorse the social-archaeological approach developed by Frieman, predicting that this book will most certainly be a reference for all current and future social archaeologists, I think that it will be criticized by more 'scientific' archaeologists (possibly the ones who joke about how everything is ritual to social archaeologists, as mentioned in the book), even though there is an increasing engagement between the two types of 'Archaeology'. In my view, those researchers have possibly 'forgotten' what it means to be an archaeologist and that we must, above all, try to engage with 'people's beliefs, actions, and engagements with each other and the wider world' (p. 189).

A further point I wish to make is connected to my perspective on the role of archaeology. Although the author advocates that archaeologists must do more than just study the artefactual remains from previous communities, the initial sentences in 'Working from fragmented data' (Chapter 2, p. 55), stating that 'our primary role is to study the material record of past people's activities, to determine what it comprises […] as well as begin to ask why people did those things', can be seen as a bit simplistic. Nevertheless, the author concludes her last chapter by recognizing that 'the past is alive in the present' (p.186) and that people are (and were) 'complicated social constellations' (p. 198). Whether you are a social archaeologist or not, this book is a must-read for anyone studying innovations and change, but especially anyone interested in human complexity and how we were, and always will be, connected in a flux.

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